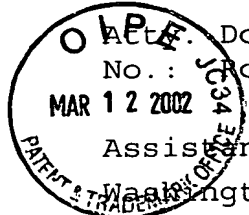


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PATENT APPLICATION
L. Nelson
IDS
10-21-02

Applicant(s) Steven J. CARPENTER
Title VIBRATORY FINISHER WITH BLASTING NOZZLE
Serial No. : 10/053 236 Group: Unknown
Confirmation No.: Unknown
Filed : November 9, 2001 Examiner: Unknown
International Application No.: N/A
International Filing Date : N/A



Att. Docket
No.: Photo-Finish Case 56A
Assistant Commissioner for Patents
Washington, DC 20231

FIRST CLASS MAILING CERTIFICATE

Sir:

I hereby certify that this correspondence is being deposited with the United States Postal Service under 37 CFR 1.8 as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington DC 20231, on March 5 2002.

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Reg. No. 25 072
Reg. No. 22 724
Reg. No. 32 549
Reg. No. 36 589
Reg. No. 31 257
Reg. No. 24 949
Reg. No. 40 694
Reg. No. 36 328
Reg. No. 44 621

Correspondence: Second Information Disclosure Statement,
with all listed enclosures

190.0112



PATENT APPLICATION

IN THE U.S. PATENT AND TRADEMARK OFFICE

March 5, 2002

Applicant(s): Steven J. CARPENTER

For: VIBRATORY FINISHER WITH BLASTING NOZZLE

Serial No.: 10/053 236 Group: Unknown

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Assistant Commissioner for Patents
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SECOND INFORMATION DISCLOSURE STATEMENT

Sir:

In compliance with the provisions of Rules 1.97(b)(3) and 1.98, enclosed is the International Search Report received in PCT Application No. PCT/US01/19013, which corresponds to Copies of these references were submitted in U.S. Application Serial No. 09/732 794, filed December 8, 2000, entitled CHAMBER-TYPE VIBRATORY FINISHER WITH BLASTING NOZZLE, together with Form PTO-1449 and copies of the references cited therein, together with an English translation of DE 3 811 680.

Regarding the references identified in the PCT Search Report, FR 2 445 735 is indicated as an "X" and "Y" reference relative to selected claims. FR '735, however, is not believed to anticipate or render obvious the claims as pending herein since the process and apparatus illustrated in FR '735 comprises in the Figures 1-2 embodiment a horizontally-oriented drum type vibrator which causes the parts within the drum to move upwardly along the side and then tumble back in the manner illustrated by Figure 2 so that this arrangement hence functions in a manner similar to a conventional tumbling barrel device. FR '735 illustrates in Figures 3-4 another

vibratory barrel having vanes so that the treated mass is effectively moved lengthwise through the barrel but nevertheless the mass still undergoes a movement similar to that depicted by Figure 2. In this Figures 3-4 embodiment, the abrasive is supplied by means of a rotary impeller wheel. The arrangements of FR '735 hence do not provide or result in the same type of movement and treating which is achieved according to the process and apparatus of the present invention, nor is there any teaching or suggestion in FR '735 with respect to the desirable features of the present invention.

Regarding the cited U.S. 5 637 029 and EP 636 456, both designated as "Y" references in the PCT Search Report, the '029 reference illustrates a rotary tumbler defined by a moving belt and employing an impeller wheel for discharging abrasive therein, and EP '456 illustrates a barrel or drum type device wherein the material being treated moves upwardly along an arcuate deflector or element for treatment using a similar motion, as illustrated by Figure 3. These latter patents hence fail to teach the desirable combination of movements and actions which are provided by the process and apparatus of the present invention.

As to DE 38 11 680 as cited in the PCT Search Report, and which is designated as a "A" reference, this does illustrate an upwardly-opening vibrator having an annular channel which due to vibration effects movement of loose mass or parts therealong. In the arrangement of '680, the flow channel has in the Figures 1-3 embodiment a dam 5 which protrudes upwardly at one end of the annular channel so that the parts moving along the channel are caused to build up behind the dam so that the parts thus collect behind the dam to a sufficient extent so as to then spill over the top of the dam. Positioned above the dam is a blasting nozzle which effects abrasive blasting of the parts located at the dam. The

blasting nozzle hence discharges abrasive onto the parts while the parts are effectively undergoing a movement which effects spillover of the parts over the dam, and hence the parts when subjected to the blasting nozzle are no longer being effectively moved through the typical tumbling helical flow path along the annular channel. Further, as to the embodiment illustrated by Figures 1-2, the '680 patent specifically states that optimum performance is achieved by positioning the blasting nozzle over the dam.

DE '680 also illustrates a second embodiment in Figures 4-6 wherein the annular channel of the vibrator has a raised separator screen 121 associated therewith, and a movable deflector element 11 causes the helically flowing parts in the annular channel to be deflected upwardly onto the separator member or screen 121. When the parts are on the screen 121 they are subjected to abrasive discharged from a blasting nozzle which is positioned over the raised screen as illustrated by Figures 4 and 6, which screen enables the abrasive to fall downwardly through the screen for separation and recycling. The parts in this Figure 4-6 embodiment are hence blasted when positioned on a separate screen member, and hence the parts are not blasted while undergoing a tumbling helical flow.

The disclosed embodiments of DE '680 as mentioned above hence both disclose that the parts should be abrasively blasted when the parts appear to be undergoing principally a linear forwardly-advancing movement, either by being advanced upwardly and forwardly over a dam as in Figures 1-2, or forwardly along a support screen as in Figures 4-6, and this patent hence does not recognize the highly desirable and improved performance which can be achieved when the blasting occurs simultaneous with and acting upon the tumbling and helically-flowing parts as they are advanced vibratorily along the main finishing channel, as disclosed and claimed herein.

The remaining cited references in the PCT Search Report are all designated "A" and all appear to be directed to arrangements which are significantly different from the present invention so that discussion thereof is believed unnecessary.

Further and favorable consideration of this application is respectfully requested.

Respectfully submitted,

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Encl: Copy of International Search Report mailed
November 13, 2001 in PCT/US01/19013
Form PTO-1449, and one copy of each reference
listed thereon

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